



ENVIRONMENTAL COMMISSION MEETING

MONDAY, OCTOBER 14, 2019 – 7:00 P.M.

Community Meeting Chambers, Los Altos City Hall
1 North San Antonio Road, Los Altos, California

ESTABLISH QUORUM

PLEDGE OF ALLEGIANCE

PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA

Members of the audience may bring to the Commission's attention any item that is not on the agenda. Please complete a "Request to Speak" form and submit it to the Staff Liaison. Speakers are generally given two or three minutes, at the discretion of the Chair. Please be advised that, by law, the Commission is unable to discuss or take action on issues presented during the Public Comment Period. According to State Law (also known as "the Brown Act") items must first be noticed on the agenda before any discussion or action.

ITEMS FOR CONSIDERATION/ACTION

1. **Environmental Commission Minutes**
Approve minutes of the regular meeting of September 9, 2019
2. **Herbicide Use in Los Altos City Parks**
Review and discuss current use of herbicides in City parks
3. **Silicon Valley Clean Energy Authority**
Discuss proposed electrification Reach Codes for 2019 Energy Code
4. **Environmental Commission Work Plan**
 - Update from Solid Waste Disposal Contract Subcommittee and consideration of statement to City Council
 - Update on Los Altos Community Foundation Environmental Education Fund EnviroThon Challenge
 - Update on City web site environmental measures
 - Commissioner updates on other work plan items

INFORMATIONAL ITEMS

5. **City Staff Updates**
Receive information and announcements from City staff

COMMISSIONERS' REPORTS AND COMMENTS

POTENTIAL FUTURE AGENDA ITEMS

ADJOURNMENT

SPECIAL NOTICES TO PUBLIC

In compliance with the Americans with Disabilities Act, the City of Los Altos will make reasonable arrangements to ensure accessibility to this meeting. If you need special assistance to participate in this meeting, please contact the City Clerk at least 48 hours prior to the meeting at (650) 947-2720.

Agendas, Staff Reports and some associated documents for the Environmental Commission items may be viewed on the Internet at https://www.losaltosca.gov/meetings?field_microsite_tid_1=2261.

If you wish to provide written materials, please provide the Commission Staff Liaison with **10 copies** of any document that you would like to submit to the Commissioners in order for it to become part of the public record.

For other questions regarding the meeting proceedings, please contact the City Clerk at (650) 947-2720.

**MINUTES OF THE MEETING OF THE ENVIRONMENTAL COMMISSION OF
THE CITY OF LOS ALTOS, HELD ON MONDAY, SEPTEMBER 9, 2019 BEGINNING
AT 7:00 P.M. AT COMMUNITY MEETING CHAMBERS, LOS ALTOS CITY HALL, 1
NORTH SAN ANTONIO ROAD, LOS ALTOS, CALIFORNIA**

ESTABLISH QUORUM

PRESENT: Chair Weiden, Vice Chair Yuan, Commissioners Klein, Bray, Halkola (left at 8:10 P.M.) and Teksler

ABSENT: Commissioner Martin

STAFF: Staff Liaison Niday

PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA

Gary Hedden (volunteer with Green Town Los Altos) announced upcoming events with Green Town Los Altos and the History Museum.

Bruce Karney (Mountain View resident and a representative of the Climate Reality Project – Santa Clara Chapter) recommended that the City of Los Altos complete a Greenhouse Gas emission update on a yearly basis.

ITEMS FOR CONSIDERATION/ACTION

1. Environmental Commission Minutes

Approved minutes of the regular meeting of August 12, 2019

Action: Upon a motion by Commissioner Teksler, seconded by Commissioner Yuan, the Environmental Commission approved the minutes from the August 12, 2019 regular meeting as written.

The motion was approved (6-0) by the following vote:

AYES: Weiden, Yuan, Klein, Bray, Halkola and Teksler

NOES: None

ABSENT: Martin

ABSTAIN: None

2. Herbicide Use in Los Altos City Parks

Reviewed and discussed current use of herbicides in City parks

Public Comment: None

Action: The Commission received an oral report from Manny Hernandez, Los Altos Municipal Services Director, and discussed the herbicide use in Los Altos City parks. The Commission agreed to continue to evaluate and investigate the health effects of synthetic pesticides and herbicides before continuing discussion and considering a recommendation to the Parks and Recreation Commission.

3. Silicon Valley Clean Energy Authority

Discussed the 2019 Building Electrification and Electric Vehicle Infrastructure Reach Code Initiative.

Public Comment:

Bruce Karney announced that the American Institute of Architects has committed to making all new designs carbon neutral (natural gas free) by 2030.

Gary Hedden recommends banning natural gas in the City of Los Altos.

Action: The Commission affirmed support for City development and ratification of a Reach Code based upon the work of SVCE.

4. Los Altos Community Foundation Environmental Education Fund

Discussed EnviroThon Challenge winners and award distributions.

Public Comment: None

Action: The Commission will decide on what date is appropriate for the winning teams to provide an update to the Commission; this can take place during the public comment period or put on the agenda; the Commission will also decide on what dates they will discuss next year's event.

5. Environmental Commission Work Plan

Reviewed and discussed goals for the 2019/20 Work Plan

Public Comment: None

Action: None

INFORMATIONAL ITEMS

6. City Staff Updates

Received information and announcements from City staff

COMMISSION REPORTS AND COMMENTS

None

POTENTIAL FUTURE AGENDA ITEMS

None

ADJOURNMENT

Chair Weiden adjourned the meeting at 8:27 P.M.



DATE: October 14, 2019

AGENDA ITEM #2

TO: Environmental Commission
FROM: Callie Niday, Staff Liaison
SUBJECT: Herbicide Use in Los Altos City Parks

RECOMMENDATION:

Review and take action, as appropriate, on the current use of herbicides in Los Altos City parks

BACKGROUND

At the regular meeting of August 14, 2019, the Parks and Recreation Commission (PARC) approved a motion to recommend to City Council the banning of the use of synthetic herbicides and synthetic pesticides in Los Altos parks. The PARC forwarded the August 14, 2019 commission's agenda report on "Herbicide Use in Los Altos City Parks" along with the other documents to the Environmental Commission to explore the banning of synthetic herbicides and synthetic pesticides in the City of Los Altos. At the regular meeting of September 9, 2019, Manny Hernandez, Municipal Services Director, gave a presentation to the Environmental Commission on the herbicide use in the Los Altos City parks. The Commission agreed to continue to evaluate and investigate the effects of synthetic pesticides and herbicides before continuing discussion and considering a recommendation to the PARC.

Like many Bay Area agencies, herbicides are used to control or eliminate unwanted vegetation in public parks, open spaces and other city-owned outdoor spaces. The City of Los Altos does not use Roundup; however, the current herbicide being used to control weeds is Ranger Pro. Ranger Pro contains 41% Glyphosate (same active ingredient as Roundup). This product is a complete broad spectrum non-selective post-emergent professional herbicide, approved and in compliance. Ranger Pro is generic for Roundup and is equivalent and just as effective as the name brand. This generic roundup will kill most weeds and grasses. Ranger Pro moves through the plant from the point of foliage contact to and into the root system. It is then absorbed into the soil and breaks down naturally, and therefore will not spread through the ground and kill neighboring plants.

Within the Municipal Services Department, the Park Maintenance Division makes efforts to avoid usage of herbicide around the public or common areas. Pathway spraying is done as early as 5am to allow drying prior to the arrival of park users. There are no public pathways through median landscapes. In addition, staff uses a diluted mix of Ranger Pro, a dilution of 2% with water. Application happens once a year, to target the weed explosion in the spring. Ranger Pro is applied along park pathways, City owned medians, and hardscape as needed. On direction from the County, Glyphosate herbicide is not used on the Foothill medians as it is owned by the County. Weeds in those areas are knocked down throughout the year. Several other "organic" herbicides and time-consuming

techniques, such as torching and use of vinegar, have not proven successful. Neighboring agencies have experienced the same.

Over the last few years, the City of Los Altos has severely cut back on the usage of Glyphosate herbicides in parks and medians by limiting where they are used and when the public is least present. A move completely away from the use of Glyphosate products will have aesthetic implications in the parks and medians.

The City is currently mandated by the Santa Clara Valley Urban Runoff Pollution Prevention Program through a Municipal Regional Permit to maintain an Integrated Pest Management Program that mandates minimal herbicide use. The City is currently in compliance. The current Integrated Pest Management Policy prohibits the use of pesticides for pest control.

Staff reached out to surrounding agencies and below is a summary of the information received from six neighboring agencies on their weed control practices.

Redwood City:

Redwood City uses pre-emergent treatment twice per year (Cool/Warm). The herbicides they have used since stopping the use of Glyphosates include:

- Scythe- not found to be effective in recycled water or high salinity soils areas, stopped use.
- Avenger Organic- not found to be effective at all.
- Fiestas Organic- used for a long time, not super effective but some staff like it for very specific uses so we keep it.
- Finale- Was effective, new main product, then they didn't re-register it for use in California. (Tons of So Cal cities switched to it also)

Atherton:

Atherton currently uses Roundup on non-turf areas. However, in the coming weeks Council will discuss discontinued use of it. If they approve and it is discontinued, Atherton proposes to use Mirimichi or Reward. When using Roundup, Atherton applied it 5 times a year (3 applications over 3 days) in the early morning and close off sections until dry. The City has not used herbicides on turf areas for a few years now. The City only has one 22-acre park so it may be easier for the City to control weeds. The focus is to keep the turf healthy. The City dethatches once a year, aerates twice a year and fertilizes every 3 months with a seasonal fertilizer. When the City gets Clover, it uses nitrogen. The City has well water and keeps the turf areas well irrigated.

Sunnyvale:

Sunnyvale has not banned the use of Roundup or Glyphosate derivatives. It is still legal use in California. CA DPR, CA EPA, and the US EPA still has listed it as a legal product to use. Sunnyvale has been looking into alternatives because Baylands Park is a 177-acre Santa Clara County park and the county banned the use of Glyphosate on all county owned facilities last fall.

The City is trying an alternative which is Glufosinate-ammonium, trade name of the product we use is Lifeline Herbicide. Its mode of action is like Glyphosate in the it is an enzyme blocker of an amino acid synthesis pathway. The amino acid synthesis blocked by Glyphosate is more effective than Glufosinate-ammonium enzyme action. Because of the stigma of the most recent litigation many

agencies are banning its use just to avoid any potential litigation that could arise. So far Glufosinate-ammonium has not been linked to any cancers.

Currently the City does not have any hard data on its use. The first use of Lifeline Herbicide has been at Baylands Park. The City has just started using it. Some City staff are experimenting with Lifeline Herbicide at other parks and open space facilities but for the most part most the staff still uses tried and true Roundup.

Foster City:

Foster City stopped using Roundup last year, but continued to use Ranger Pro. The City has since stopped using both products and has just started using Lifeline mixed with Magnify (surfactant). As a result, the City started applying this last week. Foster City has limited to spraying windows due to what seems to be never-ending winds. The City also uses Reward when necessary as well as some broadleaf chemicals such as Speedzone and Turflon. The City has also increased the usage of Surflan for pre-emergent control. It has had mixed results with this, especially in areas where the City has done a lot of mulching.

San Mateo County Parks:

San Mateo County currently uses a Glyphosate herbicide but are stopping use once the product on hand is used up, which will be by December 2019 when the staff recommendation expires. The County has been using Finalsan with Oroboost as a surfactant. We also have recommendations for Gallery and Dimension, the results are somewhat comparable to Roundup but decreases staff time by mechanically removing weeds as well as Workers Comp claims for repetitive motion injuries. Glyphosate is really the optimum treatment choice since it is selective in what it treats. The others mentioned are not selective and have a warning label compared to a danger label on Roundup.

Santa Clara:

The County of Santa Clara stopped using Glyphosate last year in public areas. They were spraying Reward and tested a propane burner until something caught on fire. Currently, there are not using any organics.

DISCUSSION

Under the Community Development Department, the City of Los Altos Environmental Commission “shall have those powers and duties entrusted to it by the council from time to time and shall submit an annual report to the council. The Environmental Commission studies and makes recommendations to Council on issues that affect the natural and built environment in the city and the region. Additional duties include special projects as directed by the Council.”

Should the PARC wish to further pursue this topic, it is recommended that the topic also be reviewed by the Environmental Commission, prior to being forwarded to the City Council.

Attachments:

- A. Glyphosate General Fact Sheet
- B. Pesticides Fact Sheet
- C. IPM Infographic
- D. Regional IPM Practices

General Fact Sheet

- **What is glyphosate?**
- **What are some products that contain glyphosate?**
- **How does glyphosate work?**
- **How might I be exposed to glyphosate?**
- **What are some signs and symptoms from a brief exposure to glyphosate?**
- **What happens to glyphosate when it enters the body?**
- **Is glyphosate likely to contribute to the development of cancer?**
- **Has anyone studied non-cancer effects from long-term exposure to glyphosate?**
- **Are children more sensitive to glyphosate than adults?**
- **What happens to glyphosate in the environment?**
- **Can glyphosate affect birds, fish, and other wildlife?**

What is glyphosate?

Glyphosate is an herbicide. It is applied to the leaves of plants to kill both broadleaf plants and grasses. The sodium salt form of glyphosate is used to regulate plant growth and ripen specific crops.

Glyphosate was first registered for use in the U.S. in 1974. Glyphosate is one of the most widely used herbicides in the United States. People apply it in agriculture and forestry, on lawns and gardens, and for weeds in industrial areas. Some products containing glyphosate control aquatic plants.



What are some products that contain glyphosate?

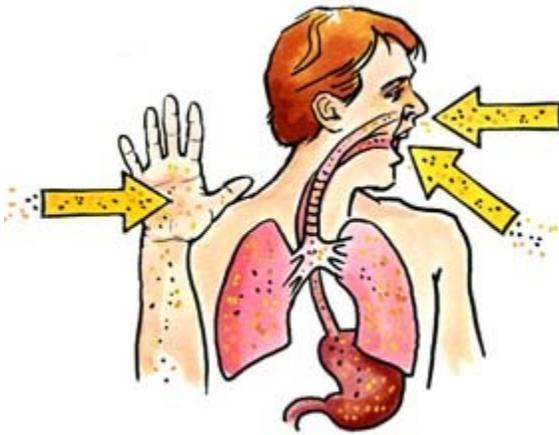
Glyphosate comes in many forms, including an acid and several salts. These can be either solids or an amber-colored liquid. There are over 750 products containing glyphosate for sale in the United States.

Always **follow label instructions** and take steps to avoid exposure. If any exposures occur, be sure to follow the First Aid instructions on the product label carefully. For additional treatment advice, contact the Poison Control Center at 800-222-1222. If you wish to discuss a pesticide problem, please call 800-858-7378.

How does glyphosate work?

Glyphosate is a non-selective herbicide, meaning it will kill most plants. It prevents the plants from making certain proteins that are needed for plant growth. Glyphosate stops a specific enzyme pathway, the shikimic acid pathway. The shikimic acid pathway is necessary for plants and some microorganisms.

How might I be exposed to glyphosate?



You can be exposed to glyphosate if you get it on your skin, in your eyes or breathe it in when you are using it. You might swallow some glyphosate if you eat or smoke after applying it without washing your hands first. You may also be exposed if you touch plants that are still wet with spray. Glyphosate isn't likely to vaporize after it is sprayed.

What are some signs and symptoms from a brief exposure to glyphosate?

Pure glyphosate is low in toxicity, but products usually contain other ingredients that help the glyphosate get into the plants. The other ingredients in the product can make the product more toxic. Products containing glyphosate may cause eye or skin irritation. People who breathed in spray mist from products containing glyphosate felt irritation in their nose and throat. Swallowing products with glyphosate can cause increased saliva, burns in the mouth and throat, nausea, vomiting, and diarrhea. Fatalities have been reported in cases of intentional ingestion.

Pets may be at risk if they touch or eat plants that are still wet with spray from products containing glyphosate. Animals exposed to products with glyphosate may drool, vomit, have diarrhea, lose their appetite, or seem sleepy.

What happens to glyphosate when it enters the body?

In humans, glyphosate does not easily pass through the skin. Glyphosate that is absorbed or ingested will pass through the body relatively quickly. The vast majority of glyphosate leaves the body in urine and feces without being changed into another chemical.



Is glyphosate likely to contribute to the development of cancer?



Animal and human studies were evaluated by regulatory agencies in the USA, Canada, Japan, Australia, and the European Union, as well as the Joint Meeting on Pesticide Residues of the United Nations and World Health Organization (WHO). These agencies looked at cancer rates in humans and studies where laboratory animals were fed high doses of glyphosate. Based on these studies, they determined that glyphosate is not likely to be carcinogenic. However, a committee of scientists working for the International Agency for Research on Cancer of the WHO evaluated fewer studies and reported that glyphosate is probably carcinogenic.

Has anyone studied non-cancer effects from long-term exposure to glyphosate?

Long-term feeding studies in animals were assessed by the U.S. Environmental Protection Agency (EPA) and other regulatory authorities. Based on these evaluations, they found there is no evidence glyphosate is toxic to the nervous or immune systems. They also found it is not a developmental or reproductive toxin.

Are children more sensitive to glyphosate than adults?

As required by the Food Quality Protection Act, the EPA has determined that children are not more sensitive to glyphosate as compared to the general population.

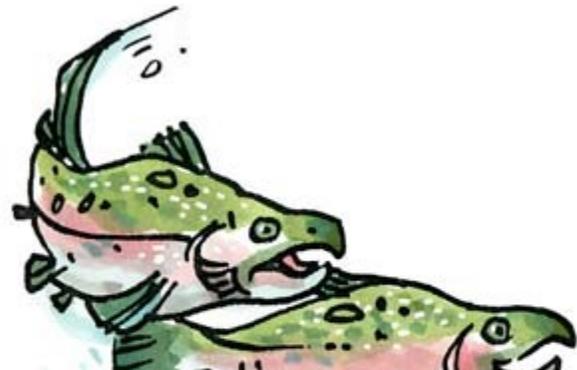
What happens to glyphosate in the environment?

Glyphosate binds tightly to soil. It can persist in soil for up to 6 months depending on the climate and the type of soil it is in. Glyphosate is broken down by bacteria in the soil.

Glyphosate is not likely to get into groundwater because it binds tightly to soil. In one study, **half** the glyphosate in dead leaves broke down in 8 or 9 days. Another study found that some glyphosate was taken up by carrots and lettuce after the soil was treated with it.

Can glyphosate affect birds, fish, or other wildlife?

Pure glyphosate is low in toxicity to fish and wildlife, but some products containing glyphosate may be toxic because of the other ingredients in them. Glyphosate may affect fish and wildlife indirectly because killing the plants alters the animals' habitat.





Where can I get more information?

For more detailed information about glyphosate please visit the list of [referenced resources](#) or call the National Pesticide Information Center, Monday - Friday, between 8:00am - 12:00pm Pacific Time (11:00am - 3:00pm Eastern Time) at 800-858-7378 or visit us on the web at npic.orst.edu. NPIC provides objective, science-based answers to questions about pesticides.

Please cite as: Henderson, A. M.; Gervais, J. A.; Luukinen, B.; Buhl, K.; Stone, D.; Cross, A.; Jenkins, J. 2010. ***Glyphosate General Fact Sheet***; National Pesticide Information Center, Oregon State University Extension Services.
<http://npic.orst.edu/factsheets/glyphogen.html>.

Date Reviewed: 2010; limited revisions made: March 2019

NPIC fact sheets are designed to answer questions that are commonly asked by the general public about pesticides that are regulated by the U.S. Environmental Protection Agency (U.S. EPA). This document is intended to be educational in nature and helpful to consumers for making decisions about pesticide use.



Related Topics:

[Glyphosate Overview](#)

[Adjuvants](#)

[PDF Version](#)

What are pests?

[Learn about a pest](#)

[Identify a pest](#)

[Control a pest](#)

[Integrated Pest Management](#)

What are pesticides?

[Herbicides](#)

Pesticides - What's my Risk?

Topic Fact Sheet

Introduction

Many times, non-chemical controls can be used to deal with pests. If you decide to use a pesticide, it is important to understand the risks associated with a specific product or treatment. No matter the treatment method, there is always some degree of risk associated with using a pesticide. Understanding the risk from specific pesticides can help you decide whether or not you want to use them, or help you choose between two different products.



Understanding pesticide risks

Many people believe that some pesticides are "safe," while others are "dangerous." Actually, all chemicals, including all pesticides, have the potential to be hazardous. Even products that are considered low in toxicity, natural, or organic can be hazardous if someone or something comes in contact with enough of the substance.

The toxicity of a pesticide, its **formulation**, and how much you touch, eat, or breathe in, are all important considerations. The likelihood of experiencing some health effect as a result of using a product is referred to as the **pesticide risk**. The risk of any pesticide use depends on which pesticide is used, how much pesticide is applied, how often the pesticide is applied, and who or what has contact with the pesticide.

Pesticide Risk:

Your risk from the use of pesticides depends on two things: the toxicity of the pesticide, and the amount of exposure. In other words,

$$\text{Risk} = \text{Toxicity} \times \text{Exposure}$$

Toxicity can range from low to high, and can vary depending on the route of exposure. The pesticide Signal Word is a way to determine a pesticide's general level of toxicity.

Exposure takes place when a pesticide is breathed in, touches the skin, or gets eaten.

Pesticide exposure

The chance of developing a health problem from a pesticide depends on two things: the toxicity of the pesticide and the amount of **exposure**. In order for a pesticide to affect you, you must be exposed to the pesticide by some route such as eating it (ingestion), breathing it (inhalation), or getting it on your skin or in your eyes (dermal exposure).

Even if a very toxic pesticide is used near your home, the risk may still be low. If you are not

exposed to the pesticide, it can't harm you. In some cases, a pesticide can be used without people coming into contact with it at all.

Pesticide toxicity

To help people understand the toxicity of products, pesticides are classified in groups from low to high toxicity. Because the risk or chance of a problem depends on both the toxicity **and** the amount of exposure, even pesticides that are low in toxicity can be hazardous if the exposure is high. The **signal word** describes the toxicity of the pesticide.

How toxic is the pesticide I am using?

Pesticides may contain more than one ingredient, and each may have a different toxicity level. There are several ways to estimate to the toxicity of a pesticide. One easy way is to look at the **signal word**, which is an indicator of the toxicity of the product. Every registered pesticide will have the words CAUTION, WARNING, or DANGER on the label, and that word reflects the level of toxicity of the product. Products that say CAUTION are the lowest in toxicity, WARNING indicates medium toxicity products, and DANGER is found on the most toxic products. If you want to know the toxicity of a specific pesticide, call NPIC. We can help.



Some groups of people, such as the elderly, people with health conditions, those who are pregnant, and infants and children, could be more sensitive to a pesticide than other people. Sensitive populations can minimize their risks by reducing their exposure to pesticides, and by selecting less toxic pesticides or pest control measures that do not involve pesticides.

Putting it together: What's my risk?

Toxicity and exposure are the basis for the statement, "the dose makes the poison." Just as one aspirin is beneficial for occasional pain or to manage certain medical conditions, too much aspirin (taking a whole bottle in one sitting) would be very hazardous. As the amount of exposure or the toxicity of pesticide increases, so does the risk of a problem. The higher the toxicity of the pesticide and the more exposure occurs, the greater the chance that some hazardous effect will result.

If pesticides are being applied near you, try to find out some details about the application, such as where it is happening, how much area is being treated, and what is being applied. This will help you determine your risk. If you smell, taste or feel a

pesticide, then you may have been exposed to it. In some cases, exposure can happen even if you do not smell or taste the pesticide. Try to determine the route by which you might be exposed. It is important to consider the route of exposure, or how the pesticide may contact your body. The amount that actually enters the body may vary depending on pesticide and the route of exposure. Some pesticides may move into the body very easily after an exposure, whereas others will not.

If you have been exposed to a pesticide, take note of the situation in which it happened. The length of time the exposure occurred and how much of the substance actually gets on or in the body are important details in understanding the risk. If the pesticide is low in toxicity and you had a very limited exposure, the risk is low. If the pesticide is very toxic and you had a large exposure to it, then the risk is higher.

Minimizing the chance of a problem

To minimize your chance of having a problem from using a pesticide product, look for **ways to reduce your exposure** or choose a product with lower toxicity. Always read the entire **product label** and follow any instructions for using personal protective equipment, like gloves or goggles, which help reduce your exposure. Labels may also contain instruction such as how to ventilate or the length of time to avoid a treated area. For more information on how to lower your risk, call and talk to one of our pesticide specialists.

If you have questions about this, or any pesticide-related topic, please call NPIC at **800-858-7378** (8:00am - 12:00pm PST), or email at npic@ace.orst.edu.

Last updated April 11, 2012

NPIC fact sheets are designed to answer questions that are commonly asked by the general public about pesticides that are regulated by the U.S. Environmental Protection Agency (U.S. EPA). This document is intended to be educational in nature and helpful to consumers for making decisions about pesticide use.



Related Topics:

[PDF Version](#)

What are pests?

[Learn about a pest](#)

[Identify a pest](#)

[Control a pest](#)

[Integrated Pest Management](#)

Repellents
Rodenticides
Other types of
pesticides

Disponible en español

Minimizing Pesticide Risks

Because "the dose makes the poison," someone may get sick from exposure to just about anything if their exposure is high enough. The **risk** of experiencing health problems from a pesticide depends on the **toxicity** of the pesticide and the amount of **exposure**. Even very low toxicity pesticides can be hazardous if too much is inhaled, gets on the skin, or is ingested. Minimizing the amount of pesticide used, selecting lower toxicity products and using protective equipment to minimize your exposure can all help to minimize the hazards associated with using pesticides.



Tips for Minimizing Pesticide Risks:

Applying & Storing Lawn and Garden Products



If you choose to use chemicals to control problem pests in your lawn and garden, like slugs, rodents, or weeds, follow these safety tips.

BEFORE YOU APPLY



Read the label. Double check that the product targets the insect, rodent, or weed you want to control.



Wait for good weather. Wind and rain can cause products to blow away or run off.



Put on long pants, socks & shoes, long sleeves, and rubber gloves. The label may suggest additional protection.



Remove toys and pet dishes

Consider adopting an **Integrated Pest Management (IPM)** approach. This approach emphasizes prevention, sanitation and exclusion, and utilizes pesticides only as a last resort when other options have failed.

Review the product **signal word** and **active ingredients**, and then choose the product lowest in toxicity. Call NPIC for help comparing products.

Choose products with formulations least likely to lead to exposure.

Read the **product label** first. The pesticide label will list the minimum amount of protective equipment, like gloves or goggles, necessary to reduce your exposure.

Consider using additional protective equipment to decrease your exposure even further.



Make sure the pesticide label lists the specific place you intend to use the product. Using a pesticide in unlisted locations is illegal and unsafe.

- Use the appropriate amount of pesticide for your job by following the label directions closely. Applying too much pesticide may lead to higher levels of exposure to people, pets and the environment.
- Avoid allowing children, pets, or sensitive people in treatment areas to prevent accidental exposures during pesticide applications.
- Consider staying out of treated areas after an application for the amount of time listed on the label directions.
- For liquid products, consider avoiding treated areas until they have dried thoroughly and the area has been ventilated.
- Consider keeping pets and children off treated lawns and gardens until granular pesticides have dissolved.
- Ensure items such as food, toys, pet bowls and clothing are stored a safe distance away from any pesticide treatment.
- Remember **disinfectants** are pesticides, too! Always read and follow the label, even with products you've used before.

These are just a few general tips on how to minimize pesticide risks. One of our specialists can provide you custom-tailored advice on ways to minimize the risk of your particular situation. If you have questions, consider giving us a call at **1-800-858-7378** (8:00am - 12:00pm PST), or email us at npic@ace.orst.edu.

Additional Resources:

- **50 Ways to Treat Your Pesticide** - Pesticide Environmental Stewardship Program
- **EPA Citizen's Guide to Pest Control and Pesticide Safety** - Environmental Protection Agency (EPA)
- **Pesticides and the home, lawn, and garden** - Purdue University
- **Reduce your Child's Chances of Pesticide Poisoning** - Environmental Protection Agency (EPA)
- **Poison-Proof Your Home: One Room at a Time** - Environmental Protection Agency (EPA)
- **Reducing Pesticide Exposure in Schools** - National Institute for Occupational Safety and Health (NIOSH)
- **Reducing Human Pesticide Handling Risks** - National Ag Safety Database
- **Protecting Farm Families From Pesticide Exposures** - CropLife Foundation
- **Wear Protective Clothing When Applying Pesticides** - National Ag Safety Database
- **Are You Ready to Work?** - National Ag Safety Database

What is IPM?

Integrated Pest Management is a science-based approach that combines a variety of techniques. By studying their life cycles and how pests interact with the environment, IPM professionals can manage pests with the most current methods to improve management, lower costs, and reduce risks to people and the environment.

IPM tools include:

- Alter surroundings
- Add beneficial insects/organisms
- Grow plants that resist pests
- Disrupt development of pest
- Prevention of pest problem developing
- Disrupt insect behaviors
- Use pesticides

1 IDENTIFY/MONITOR

Determine the causal agent and its abundance (contact your local extension agent for help).

2 EVALUATE

The results from monitoring will help to answer the questions: Is the pest causing damage? Do we need to act? As pest numbers increase toward the economic threshold further treatments may be necessary.

3 PREVENT

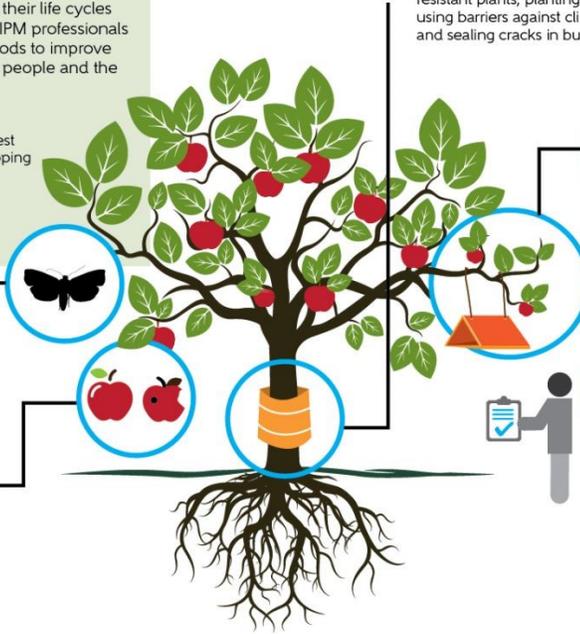
Some pest problems can be prevented by using resistant plants, planting early, rotating crops, using barriers against climbing pests, sanitation, and sealing cracks in buildings.

4 ACTION

IPM uses multiple tools to reduce pests below an economically damaging level. A careful selection of preventive and curative treatments will reduce reliance on any one tactic and increase likelihood of success.

5 MONITOR

Continue to monitor the pest population. If it remains low or decreases, further treatments may not be necessary, but if it increases and exceeds the action threshold, another IPM tool should be used.



WHERE CAN YOU PRACTICE IPM?



Buildings and Homes:

Inspect, identify pests, keep pests out, clean to deny pests food and water, vacuum, trap, or use low-risk pesticides.



Farms:

Check for pests/pest damage regularly, identify accurately, choose pest-resistant plant varieties, encourage/introduce beneficial insects, time planting to avoid pests, and if needed use low-risk pesticides.



Managed Natural Systems:

Identify the pest and use management options that have minimal risks to pollinators, humans, and pets.



The Entomological Society of America is the largest organization in the world serving the needs of entomologists and other insect scientists. ESA stands as a resource for policymakers and the general public who seek to understand the importance and diversity of earth's most diverse life form— insects. Learn more at www.entsoc.org.

5.0 Permittee Specific Improvements and Enhancements

As described in Section 3.0 of this report, Permittees have been implementing pesticide toxicity control programs since 2003. The sections below summarize the improvements to IPM programs made by Permittees in the preceding five years, and enhancements that are planned in the subsequent permit term.

5.1 City of Campbell

Improvements to IPM Practices in the Last Five Years

The City of Campbell used to spray herbicides on bare ground to remove weeds in recreational areas. To create pesticide-free parks, the City now places three inches of mulch over bare areas. In addition, the City replaced cool-season grasses with warm-season Bermuda grass in athletic fields and converted a number of large areas from turf to a xeriscape. The aggressive growth and drought tolerance of the warm-season grass does not allow weeds to germinate. All of the City's park maintenance staff completed the Bay-Friendly Training which includes thorough training on IPM practices.

Enhancements to IPM Practices Planned for the Next Permit Term

In the next permit term, the City of Campbell plans to expand the practice of mulching bare ground in areas outside of parks to eliminate the use of pesticides at more sites. The City also plans to enhance staff trainings with information on IPM, use microorganisms to improve soil health, and capture and relocate honey bees instead of killing them.

5.2 City of Cupertino

Improvements to IPM Practices in the Last Five Years

The City of Cupertino annually evaluated IPM practices, and incorporated improvements or new methods. For example, the City increased use of mulch as weed inhibitor, transitioned to drought-tolerant landscaping, used drip irrigation to curtail excessive watering of flower beds, trimmed back vegetation to curb Argentine ants, and removed fungus infected tree limbs to halt spread of disease. The City utilizes volunteers to assist in manual removal of invasive species.

The City began using the SCVURPPP Pesticide Tracking Excel Workbook to improve pesticide tracking. The City supported employees' attendance in IPM seminars at numerous conferences and online courses. At the City's annual IPM training, all participants discuss the trainings they have received, and bring new ideas to the table for implementation in the field.

Enhancements to IPM Practices Planned for the Next Permit Term

City staff performing landscape and tree maintenance are committed to continually expanding use of IPM methods and enhancing staff training. Through continued exposure to IPM seminars and knowledge gained from field trials, City staff plan on annual incremental improvements in IPM practices.

5.3. City of Los Altos

Improvements to IPM Practices in the Last Five Years

The City's IPM procedures were updated in 2017 to include the practice of mulching bare ground areas, and replacing turf with drought tolerant, low water need plants. In 2016, the City employed successful IPM practices from the City's orchards to create pesticide-free parks. These included replacing sprays with baits and traps, mulching, planting open areas with ground covers, and mechanical removal of weeds. Preventative practices employed included improved sanitation, and replacement of plants that required frequent pesticide application with native plants.

Enhancements to IPM Practices Planned for the Next Permit Term

The City plans to add effective rodent control practices to its IPM Policy and Standard Operating Procedures, and enforce trapping of rodents in buildings and parks. Los Altos also plans to expand the practice of mulching bare ground areas and the use of drought tolerant plants in the City's median strips. The City plans to increase supervision of contractors to ensure compliance with its IPM Policy.

5.4. Town of Los Altos Hills

Improvements to IPM Practices in the Last Five Years

The Town of Los Altos Hills monitored weeds and used manual removal and mulch for weed abatement. The Town aimed to use non-chemical strategies, and when a pest threshold was exceeded, used species-targeted pesticides rather than broadcast spray methods.

Enhancements to IPM Practices Planned for the Next Permit Term

In mid-2020, the Town plans to begin an update of its IPM Policy to include enhanced staff training on IPM. The Town plans to readopt the Policy by Council in the next permit term.

5.5. Town of Los Gatos

Improvements to IPM Practices in the Last Five Years

The Town of Los Gatos updated its Standard Operating Procedures for contractors managing pest control in the Town. The Town no longer sprays swarming bees and wasps, and instead relocates hives and traps wasps. In addition, the Town employs prevention practices such as careful sanitation and visual inspections. For example, picnic tables are washed regularly, trash cans are emptied frequently, and potential nesting sites in trees are closed with caulk. The Town also added IPM training to routine tailgate safety meetings.

Enhancements to IPM Practices Planned for the Next Permit Term

In the next permit term, the Town plans to continue the reduction of pesticides in parks and buildings through increased use of mechanical removal of pest vegetation and building pests. The Town plans to discontinue using pesticides on roadsides and public right-of-ways.

5.6. City of Milpitas

Improvements to IPM Practices in the Last Five Years

The City of Milpitas updated its SOPs in 2017 to include practices suggested by a contracted Pesticide Control Advisor (PCA). Staff regularly utilize non-chemical strategies such as monitoring, mowing weeds, mulching. The City also began requiring all contractors to submit monthly pest management reports. City staff also employ IPM practices for addressing pests; for example, a contractor was brought in to safely vacuum and relocate beehives on City property or right-of-ways. Additionally, the City identified opportunities for removing turf and replacing with native, drought tolerant plants including establishing a demonstration garden at the City's Fire Station 1. As an incentive to encourage staff training and on-going education, the City began offering a 4% pay increase to employees that have obtained a Qualified Applicator Certification (QAC) or Qualified Applicator License (QAL).

Enhancements to IPM Practices Planned for the Next Permit Term

City staff plans to review overall IPM implementation and identify areas for improvement in staff trainings and hiring practices for contractors that apply pesticides, and also plans to increase supervision of contractors. During the first two years of the next permit term, staff plans to review the City's IPM policies and practices and identify an action plan to implement improvements. City staff also plans to continue to look for more opportunities to replace turf with native, drought tolerant plantings.

5.7. City of Monte Sereno

Improvements to IPM Practices in the Last Five Years

The City of Monte Sereno implemented trapping of pests when necessary (e.g., gophers, flies), regular monitoring of pests, and use of an IPM-certified pest control contractor. The City removed turf in FY 2017/18 from the small landscaped area in front of City Hall, and installed drought-tolerant California native plants, which are more pest resistant.

Enhancements to IPM Practices Planned for the Next Permit Term

In the first half of the subsequent permit term, City staff plans to work with the West Valley Clean Water Program Authority to conduct IPM outreach to Monte Sereno residents.

5.8. City of Mountain View

Improvements to IPM Practices in the Last Five Years

The City of Mountain View has not used pesticides in parks in the last three years. To deter pests, the City used mulch and other practices that promoted the health of landscaping. The City started using organic products for weed control in parks and public facilities, but found the products unpredictable and not very effective in the cooler months. For a recent tussock moth outbreak, the City chose to only treat trees in high impact areas and used the least toxic effective product.

The City required all staff who apply pesticides to obtain and maintain the Qualified Applicator Certification (QAC). The process ensures that City staff receive IPM training through the required

continuing education. The City also provided annual trainings on IPM principals for staff. In FY 2015/16, the City revised the golf course contractor's agreement to ensure adherence to the City's IPM Policy.

Enhancements to IPM Practices Planned for the Next Permit Term

The City plans to evaluate the alternative organic products being used for weed control, and create guidelines for product selection. The City also plans to develop a program that incorporates pre-emergent herbicides and other products for the cooler months when organic products are not very effective.

The City plans to update its IPM Policy to include the use of organic products in medians and other area not presently pesticide free.

5.9. City of Palo Alto

Improvements to IPM Practices in the Last Five Years

The City of Palo Alto is in the midst of revising its IPM Policy and plans to have an updated Policy by June 2020. The City established 21 pesticide-free parks and facilities with mulch, replacement of plants that require frequent pesticide applications with native plants, baits and traps, removal of wasp nests instead of broadcast sprays, installation of door sweeps, and improved sanitation. The City updated its pesticide tracking system, though still sees room for improvement. The City established criteria for hiring and supervising contractors who may apply pesticides. Staff conducted spot checks, maintained ongoing communication and required contractors to provide annual reports on their IPM applications. Starting in 2016, City staff shadowed contractors to ensure the City's IPM Policies were followed. The City enhanced outreach to residents about pesticides as part of its annual outreach plan.

Enhancements to IPM Practices Planned for the Next Permit Term

The current pesticide tracking system is complicated, and the city plans to develop a new system during the next permit term. The City also plans to enhance its outreach to residents regarding IPM practices.

5.10. City of San Jose

Improvements to IPM Practices in the Last Five Years

The City of San Jose refined and expanded functions of its pesticide data entry and tracking portal for streamlining pesticide analysis and verifying the use of alternative treatments and IPM methods. The data entry portal is used by both City staff and external vendors.

The City continued with adaptation of an ongoing rodent management pilot to monitor and evaluate thresholds and appropriate best methods including limited use of Fumitoxin (phosphine gas), trapping, and Burrow-X (carbon monoxide smoke) to control ground squirrel and rodent populations. To help control small rodent populations naturally, the City used nest boxes to attract Barn owls to 13 City parks, two community gardens, a public high school, and the San José - Santa Clara Regional Wastewater Facility.

The City extended sustainable landscape retrofit efforts to five City Fire Stations and one public high school that now serve as sustainable landscaping demonstration areas for workshops and outreach events.

The City conducted outreach to professional pesticide applicators regarding non-toxic rodent management through the ReScape Qualified Maintenance Professional program, and presented information on sustainable landscaping basics to Groundworkers and Maintenance Assistants through a training pilot program.

Enhancements to IPM Practices Planned for the Next Permit Term

The City's IPM SOPs and BMPs are contained in a living document that can be updated, as needed, to improve communication of new or changing IPM methods. The City plans to review the SOPs and BMPs to determine if enhancements to the document are needed. The pesticides tracking system may also be reviewed depending on revisions to City SOPs, BMPs, policies, and/or changes to federal list of banned pesticides. The Review of the SOPs and tracking system is planned for the first to second year of the next permit term.

5.11. City of Santa Clara

Improvements to IPM Practices in the Last Five Years

The City of Santa Clara updated its IPM policy to prohibit the use of products containing anticoagulants on City property. The City developed landscape plans that incorporated native plants, mulch in tree wells, and sheet mulching in plant beds to resist plant pests and naturally suppress weeds. The City employed good sanitation and removal of water sources for pest prevention, and used baits and traps to monitor pest populations. The City required all staff who apply pesticides to obtain a Qualified Applicator Certification (QAC) within the first year of employment and maintain the certification through continuing education. Staff training included the annual IPM training provided by the City, and seminars through a Pesticide Control Advisor (PAC) and professional organizations. Staff increased monitoring of contractor compliance through review of each pesticide control application to ensure it complied with the City's IPM Policy.

Enhancements to IPM Practices Planned for the Next Permit Term

In the next permit term, the City plans to update its pesticide tracking system. To improve pesticide tracking, the Parks Division plans to include pest control applications by individual QAC holders as part of the standard Lucity work order system software.

5.12. City of Saratoga

Improvements to IPM Practices in the Last Five Years

To deter weeds, the City planted photinia along all fence lines, and contracted for a special mower to remove roadside weeds.

The City also ceased glyphosate application in City parks, passed those restrictions on to contractors, and employed more staff to more diligently monitor contractor applications. The City purchased easier-to-clean plastic picnic tables and cleaned them weekly to deter wasps and ants.

The City implemented sanitation BMPs in City facilities to deter ants and other insects. BMPs include nightly housekeeping and trash removal and conducting cleanups immediately after all rental events and parties. Staff conducted walk-around inspections of buildings, and if any pest issues were noticed indoors, gaps/openings which might allow pest access were immediately sealed.

The City increased the number of staff receiving IPM training over the past five years, and the facilities supervisor and lead worker attended online EPA IPM seminars.

Enhancements to IPM Practices Planned for the Next Permit Term

As organic pesticides become more common, effective and affordable, the City plans to increase areas that are glyphosate free. The City plans to continue to require staff and contractors to explore and implement new IPM practices.

5.13. City of Sunnyvale

Improvements to IPM Practices in the Last Five Years

City staff inspected sites that are maintained by a contractor to ensure that pesticides are used only as a last resort. The City updated its pesticide tracking system with the SCVURPPP Pesticide Tracking Worksheet. Trainings on IPM for parks, sewer, and streets staff were enhanced with training materials on current practices, data on applied amounts, and highlighted pesticides of concern.

The City conducted extensive outreach to residents on IPM. During FY 2017/18, the IPM outreach was conducted at 42 events and through 14 informative social media posts, movie theater ads and emails. During FY 2018/19, outreach was conducted at 31 events and via 36 informative social media posts, movie theater ads and emails.

Enhancements to IPM Practices Planned for the Next Permit Term

The City plans to update the pesticide tracking system yearly to ensure that it; (a) reflects up-to-date pesticides of concern used by the City; and (b) maintains formula accuracy. The City also plans to enhance staff trainings on IPM by increasing the number of training events, such as department tailgates and continued annual trainings.

5.14. County of Santa Clara

Through a combination of innovation, sustainable culture, and operational policy, the County of Santa Clara has been able to significantly reduce pesticide applications.

- The County operated 27 out of 29 parks pesticide free in FY 2018-19. Up from 21 in 2015, and only 15 parks in 2005.
- During the past five years the County has averaged only 245 acres of roadside under chemical vegetation management, compared to an average of over 2,100 acres in 2005.

- Pesticide applications in and around County airports, structures, and urban turf and landscapes in the past five years have been all but eliminated.
- Pursuant to the County IPM ordinance, the addition of Glyphosate to the California Proposition 65 list has prompted the product's removal from the County's list of approved pesticides. Existing stocks of this herbicide have been depleted and no further use will be approved.

The County uses a variety of non-chemical practices including: cattle and goat grazing in creek corridors, installation of weed fabric, manual removal of weeds, mowing, disking, conversion of lawn and turf to landscaping with native plants, barn owl nesting boxes, burrow collapsing, canine early detection of bed bugs followed by vacuuming and steaming, vertebrate trapping, fungal infection of cockroaches, and proper sanitation, maintenance and housekeeping.

The County leased one park to an organic farm, which showcases IPM practices through various events, tours, and programs. Visitors learn the importance of soil health and optimum biological activity to promote plant vitality and pest resistance, along with the augmentation of beneficial bugs to prevent, suppress, or control pests. The farm employs mechanical methods with both hand weeding and handheld flame weeders, as well as tractor-mounted flamers and insect vacuums.

In 2017, the County established a website to educate the community on sustainable landscape design, implementation, and maintenance. The site includes how to select the right plant for a specific location, and where to purchase native plants locally.

Enhancements to IPM Practices Planned for the Next Permit Term

The County plans to focus on researching least-toxic products and practices to control roadside vegetation in areas where mechanical vegetation control is precluded due to terrain conditions and traffic hazards, a critical need for wildfire prevention.

The County also plans on implementing an IPM spatial monitoring and data collection software to collect and analyze IPM data to be more proactive in pest management decisions.

5.15. Santa Clara Valley Water District (Valley Water)

Improvements to IPM Practices in the Last Five Years

Valley Water made the following improvements to its IPM program:

- Updated both its Pesticide Policy and the Approved Pesticide list in 2018. One significant change was limiting the use of pesticides to only caution label products.
- Increased use of goat grazing, evaluated aquatic herbicide applications to ensure minimal herbicide usage by coordinating hand removal activities prior to chemical treatments, and tested and investigated new herbicide products.
- Updated its pesticide tracking system to be able to track treatments, products, gallons, target pests, IPM strategies and other pertinent comments specific to each treatment site.
- Enhanced staff trainings with inclusion of topics such as plant identification and calibration, in addition to label and Safety Data Sheets training. Valley Water is designing new trainings on IPM for staff for implementation in fall 2019.

- Prepared fact sheets for residents on topics such as Valley Water’s invasive plant management program, and use of glyphosate products.
- Hosted quarterly weed management area meetings at Valley Water Vegetation Field Operations facility.
- Ensured that Valley Water’s Pesticide Control Advisor (PCA) attended quarterly Santa Clara County IPM TAG meetings.
- Required that contractors performing any vegetation work for Vegetation Field Operations (VFO) are supervised by Valley Water maintenance staff. VFO also controls all herbicide products, mixing, loading and application.
- Created a new position to oversee tracking of the invasive plant management program and increased monitoring of post herbicide efficacy on invasive plants.

Enhancements to IPM Practices Planned for the Next Permit Term

Valley Water plans to make the following improvements to its pesticide program:

- As necessary, modify the Approved Pesticide List as new products that meet the Pesticide Policy become available.
- Expand the use of mulches and increase grazing in summer of 2020.
- Improve outreach to residents by sending project specific notices for invasive plant management work each summer.

Valley Water is designing a program to evaluate efficacy of various herbicide treatments on *Arundo donax*, and plans to implement the program in spring of 2020.

6.0 CONCLUSIONS

Through the development of this pesticide source control effectiveness evaluation report, SCVURPPP and its Permittees agencies have complied with the requirements in MRP Provision C.9.g by:

- Evaluating the effectiveness of pesticide source control measures implemented;
- Evaluating the attainment of TMDL/WQAS pesticide concentration and toxicity targets for water and sediment.
- Describing the improvements to Permittee IPM programs in the last five years; and
- Describing the improvements planned during the next Permit term.

This section summarizes the conclusions of the evaluation, including source control measures that SCVURPPP and its Permittee agencies should continue to implement and potential enhancements to assist in achieving targets for pesticide concentrations and pesticide-related toxicity in Santa Clara Valley urban creeks.

6.1. Summary of Implementation Assessment Outcomes (Levels 1 - 4)

SCVURPPP Permittee agencies have successfully implemented a number of source control measures consistent with Provision C.9 of the MRP and the TMDL/WQAS implementation plan (see Section 3.2). For example, the following Level 1 through 4 outcomes have been achieved as a result of control measure implementation:

- All SCVURPPP permittee agencies have adopted IPM policies/ordinances and established pesticide application SOPs. All municipal staff that apply pesticides receive training on the IPM policy. IPM Policies and pesticide programs have led to an increase in awareness about pesticide impacts and a change in behavior by municipal employees and contractors. SCVURPPP permittee agencies are either not using pesticides of concern, or using them in minimal quantities, and only as a last resort.
- All permittee agencies that use contractors to apply pesticides have contract specifications in place that require contractors to follow the IPM Policy and implement IPM.
- SCVURPPP agencies are working with the County HHW Program to ensure that adequate pesticide disposal services are available to all residents. For example, in both FY 16-17 and FY 17-18, the HHW Program managed more than 300,000 pounds of liquid and solid poisons (including pesticides) per year.
- SCVURPPP implements the OWOW Program in local retail stores and nurseries to provide less-toxic pest control information to residents at the point of purchase. From FY 13-14 through FY 17-18, SCVURPPP sponsored 55 store employee trainings and trained 488 employees. The willingness of store managers to participate in the OWOW Program and send employees to trainings reflects the changing attitude of pesticide sellers toward IPM and the use of less-toxic pest control methods. Regional OWOW Program leaders report an overall increase in sales of less toxic products as a result of the OWOW Program's implementation.
- SCVURPPP's various efforts to educate residents about pesticides and IPM, including media advertising, website postings and distribution of outreach materials at events, raise awareness among residences and lead to increased use of IPM and decreased use of toxic pesticides. Information on less-toxic pest control is posted on the Watershed Watch Campaign website (www.MyWatershedWatch.org).
- SCVURPPP is continuing to educate pest control professionals on IPM and water quality issues by sending them informational letters and publishing articles in the Department of Agriculture's newsletter.
- From FY 13-14 to FY 18-19, a total of 108 individuals completed the Basic Green Gardener Training and learned sustainable landscaping practices, including IPM, which they can implement at their client sites.
- As a result of SCVURPPP and Permittee efforts to reduce pesticide use at new development and redevelopment sites, project developer behavior is changing and resulting in an increase in the number of development projects that use "beneficial landscaping" techniques that minimize pesticides, fertilizers, irrigation, and runoff. In FY 13-14, only 49% of approved regulated projects

included “beneficial landscaping”, compared to 77% in FY 17-18. These data suggest that Program and Permittee efforts are reducing the potential for water quality impacts attributable to pesticide usage at new development and redevelopment projects.

- All permittees have made significant improvements to their IPM programs in the last five years. Figure 6-1 shows an overview of the types of improvements made, and the number of Permittee agencies that made these improvements. Most commonly reported by Permittees was improving their pest management practices to incorporate IPM, followed by enhancing staff trainings on IPM and updating IPM Policies/SOPs.

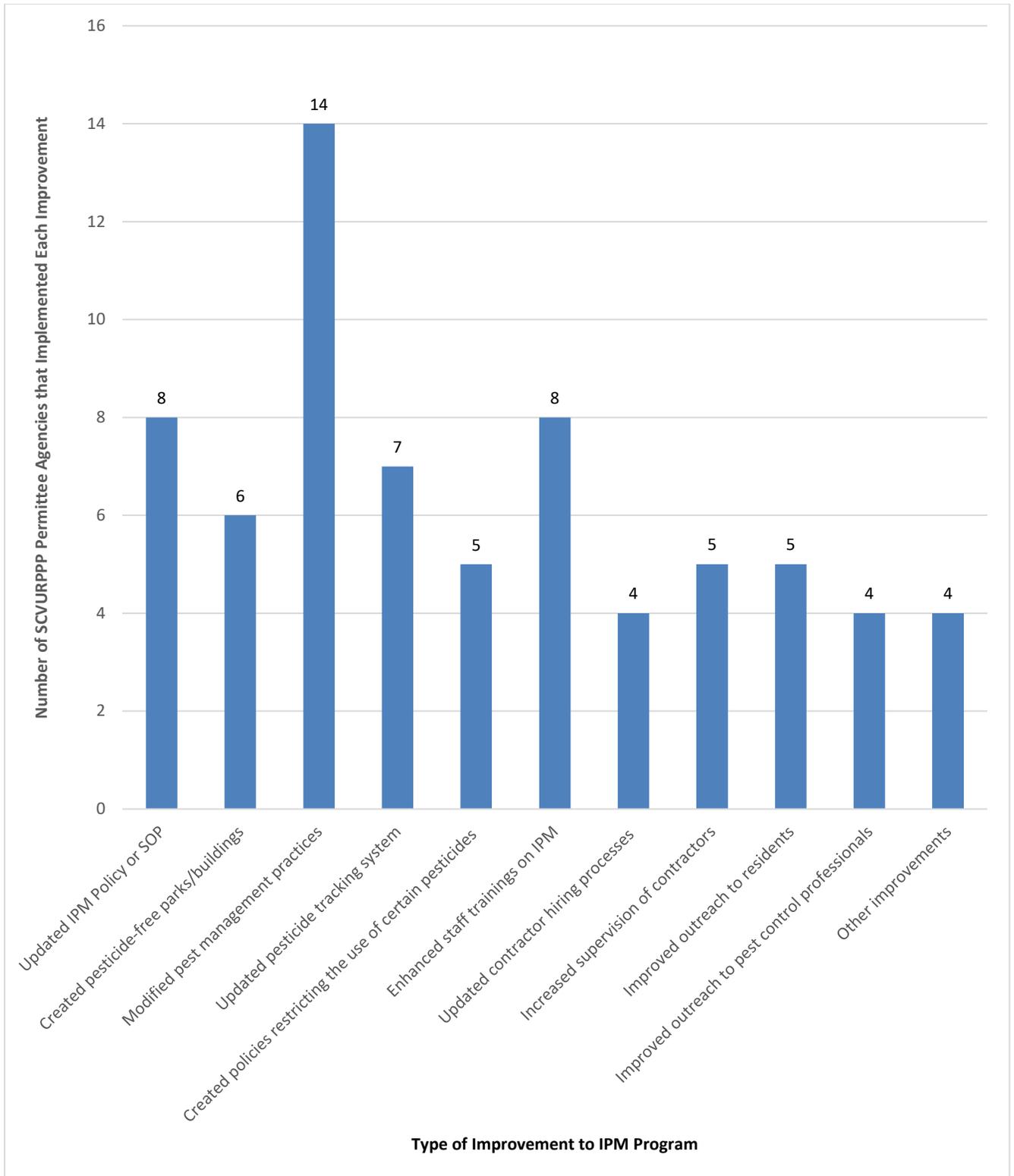


Figure 6-1. Summary of Improvements Made to SCVURPPP Permittee IPM Programs from FY 13-14 to FY 18-19.



DATE: October 14, 2019

AGENDA ITEM #3

TO: Environmental Commission

FROM: Callie Niday, Staff Liaison

SUBJECT: Silicon Valley Clean Energy Authority (SVCEA) 2019 Building Electrification and Electric Vehicle Infrastructure Reach Code Initiative

RECOMMENDATION:

Discuss proposed electrification Reach Codes for 2019 Energy Code and make a recommendation to City Council

BACKGROUND

Silicon Valley Clean Energy (SVCE), along with Peninsula Clean Energy (PCE) and the San Mateo County Office of Sustainability, are supporting their municipalities to adopt building codes that will result in safer and more comfortable buildings, increase their electric vehicle charging infrastructure, and reduce their carbon footprint.

In support of municipalities and counties in SVCE and PCE service territory, SVCE and PCE are providing extensive technical assistance plus a \$10,000 incentive to each city that brings reach codes to their councils.

Reach Code Adoption Process

Every three years, the State of California adopts new building standards that are organized in Title 24 of the California Code of Regulations, referred to as the California Building Standards Code. This regular update is referred to as a “code cycle.” The last code cycle was adopted in 2016 and was effective as of live on January 1, 2017. The next code cycle will be adopted in 2019 and will be effective January 1, 2020. Cities and counties can adopt reach codes that require items that are above and minimum state code requirements. However, these reach codes must be filed with the State.

In addition, the California Energy Commission (CEC) requires that a cost-effectiveness study be conducted and filed in the case of local amendments to the Energy Code (Title 24, Part 6). It is required that the City demonstrate to the CEC, using a cost-effectiveness study, that the amendments to the code are financially responsible and do not represent an unreasonable burden to the non-residential and residential applicants. A cost-effectiveness study is not required for amendments to the Green Building Code (Title 24, Part 11).

Statewide Cost-Effectiveness Study for Energy Code Reach Codes

Funded by the California investor-owned utilities, the California Statewide Codes and Standards Program (Statewide Program) led the development of a cost-effectiveness study for Energy Code reach codes that examined different performance-based approaches for new construction of specific

building types. There are two kinds of reach code approaches: performance-based ordinances and prescriptive ordinances. Performance-based ordinances mandate an increase in the overall energy efficiency required but leave flexibility for the builder on how to achieve this goal. In contrast, prescriptive ordinances mandate implementation of a specific measure (such as solar panels or cool roofs). The Statewide Program's analysis focused on performance-based ordinances but some conclusions about prescriptive measures can be made from the results.

Prescriptive Codes: Require one or more specific energy efficiency measures.

Performance Codes: Require a building to perform more efficiently based on accepted computer modeling and allow trade-offs between energy efficiency measures.

Why Establish Reach Codes?

The benefits of greenhouse gas (GHG) free electricity can best be realized by electrification of new and existing buildings and transportation vehicles. Electrifying buildings and vehicles transition them away from the use of natural gas and gasoline to clean energy provided by SVCE. By developing electrification reach codes, cities can save energy and reduce GHG emissions in Santa Clara and San Mateo County. All-electric buildings are safer and healthier to live in along with being cost effective, especially when adopted at the new construction stage. It is most efficient for cities to coordinate adoption of reach codes with the adoption of the new 2019 building code, taking effect January 1, 2020.

Electric Vehicle Charging Infrastructure

Electric Vehicle (EV) charging requirements in California can generally be broken into three categories:

1. EV Charging Installed: all supply equipment is installed at a parking space, such that an EV can charge without additional equipment.
2. EV Ready: Parking space is provided with all power supply and associated outlet, such that a charging station can be plugged in and a vehicle can charge.
3. EV Capable: Conduit is installed to parking space, and building electrical system has ample capacity to serve future load. An electrician would be required to complete the circuit before charging is possible.

EV charging capacity and speed can be summarized as three categories:

1. Level 1: Capable of charging at 120V, 20A. This is equivalent to a standard home outlet.
2. Level 2: Capable of charging at 240V, 30-40A. This is the service capacity typically used for larger appliance loads in homes
3. Level 3 (DC Fast Charging): Capable of charging at 20-400kW. This is the type of charger used for Tesla Superchargers and DC Fast Chargers at some supermarkets.

The 2019 California Green Building Code Update (Title 24, Part 11) increases requirements for electric vehicle charging infrastructure in new construction; including:

1. New one- and two-family dwellings and townhouses with attached private garages: must be Level 2 EV-capable
2. Multi-family dwellings: 10% of parking spaces must be Level 2 EV-capable
3. Non-residential: 6% of parking spaces must be Level 2 EV-capable

Building Appliance Electrification

For multiple reasons including health, safety economics and environmental benefits, there is considerable interest in mandating all-electric new construction, or “building electrification,” which means that the buildings would not have any fossil fuel services. All-electric buildings have electric appliances for space heating, water heating, clothes-drying, and cooking. The interest in building electrification stems from the fact that SVCE is providing 100% carbon-free electricity and eliminating the use of natural gas can greatly reduce greenhouse gas emissions from the building sector. To date, the City does not often see all-electric buildings constructed. Mandating that all new construction be all-electric through the building reach code process has not been chosen as the appropriate path because of legal implications in proving cost-effectiveness of this approach to the CEC. The leading approach is to encourage electrification by giving builders the choice of two options:

1. achieving a higher energy efficiency level than the Energy Code using mixed fuels (natural gas and electricity); or
2. building an all-electric building at the minimum efficiency as required in the Energy Code. The Statewide Program’s study analyzed this approach.

Electric Vehicle Charging Infrastructure

Local residents are showing a significant interest in electric vehicles. For example, the number of registered plug-in vehicles in Santa Clara county increased by 31% in 2018. By comparison, registrations for vehicles powered by fossil fuels shrank in 2018. It is widely known that availability of EV charging infrastructure is a critical component to EV adoption. Meanwhile, it is significantly more expensive to install charging infrastructure as a retrofit than it is during new construction. As such, ensuring that newly constructed residential and non-residential parking has ample EV charging capability will reduce long-term costs of EV infrastructure installation, while helping to increase EV adoption and decrease transportation-related greenhouse gas emissions. While California’s new minimum requirements are a step forward, it is unlikely that the requirements for multi-family dwellings and non-residential buildings are enough to keep pace with expected EV growth looking towards 2030. The Statewide Program’s team reviewed approaches to increase the amount of EV infrastructure in new construction buildings, while keeping construction costs as low as possible.

For more information on the Reach Code initiative, please visit:
<https://www.svcleanenergy.org/reach-codes/>

DISCUSSION

Staff attends monthly Member Agency Working Group (MAWG) meetings with SVCEA. The monthly updates can be found below.

SVCEA MAWG Updates (January 2019 – August 2019):

The MAWG did not meet in December 2018. City staff attended the SVCE County-wide Reach Code Working Group Launch on January 15, 2019 to learn more about the Reach Code project described above. Members of the City Manager’s Office and Community Development Department attended as well.

At the January 24, 2019 MAWG meeting, the group discussed the potential for SVCEA to form a joint funding mechanism with BAAQMD and other agencies to fund EV infrastructure. SVCEA staff is currently developing an RFP and scope of work to secure a consultant to explore the EVSE market

and identify barriers, forecast infrastructure needs, and establish a mechanism to pursue grant funding. SVCEA also updated the group on youth focused programs like the Bike to the Future event, which took place in April 2019 and the creation of a student ambassador program, focused on educating students and schools about ways to reduce GHG emissions.

On March 20, 2019, SVCEA hosted a workshop on the Reach Code project to the appropriate City Staff, the Building/Developer Community and interested stakeholders. The Reach Code project is currently underway, the consultant completed the cost effectiveness study, and the initial draft of the reach codes was released in March.

At the April 25, 2019 MAWG meeting, the group discussed the release of the new PG&E rates for 2019. Sunnyvale gave a presentation on their Climate Action Playbook. The group received an update from Aimee Bailey, Director of Decarbonization and Grid Innovation, on SVCE Innovation Onramp which went live April 3, 2019. The Heat Pump Technology Days: Water Heating Meeting was held on May 9, 2019 in San Francisco. SVCEA also informed the group that the results of the cost effectiveness study for the Reach Codes project are available. SVCE is looking for input from cities and stakeholders; May 15, 2019 is the deadline to provide input before the reach code language is drafted. In May 2019, SVCEA launched a showcase design grant focused on all-electric projects within the service territory; the new all-electric Los Altos Community Center may be eligible. Also, the group announced that PG&E has delivered gas data for the Climate Action Plan.

At the May 23, 2019 MAWG meeting, SVCE presented the heat pump water heater program, which launched in June 2019. This program is offering funding for 100 residential projects including incentives for new heat pump water heaters and new solar panels. The group received an update on the showcase of all-electric design awards, which also launched in June 2019. The awards are going to be available for all-electric buildings that are already built, rather than future projects. The goal is to showcase the participating projects in SVCE's resource center. SVCE also gave an update on the jurisdictions that have sent in a letter of intent for the reach codes – including Cupertino, Milpitas, Morgan Hill, Mountain View, Campbell, Los Altos, and Sunnyvale. On May 29, 2019, the building model reach code language was shared and on June 6, 2019, the electric vehicle model reach code was discussed.

At the June 27, 2019 MAWG meeting, the group discussed the reach codes initiative with the building officials from various jurisdictions. The building officials from the City of Sunnyvale, City of Milpitas, and the City of Cupertino attended this meeting. As previously discussed, the overall goal of adopting a reach code is to increase the electrification of buildings and decrease buildings overall carbon emissions. Additional benefits of constructing a home that is all-electric is that they are the healthier, cleaner, safer, and more cost-effective option than building a home that has mixed-fuel (electricity and natural gas). Three pathways were presented at the meeting, including: pathway 1 (all-electric), pathway 2 (mixed fuel), and pathway 3 (mixed-fuel with no space and water heating). Pathway 3 would cut the carbon emissions by 80% and would still offer people the option to have comfort appliances (i.e. gas stove top and gas fire pit). In addition, the group received an update that the all-electric showcase awards are now live; applications will be accepted until July 26, 2019. SVCE will showcase the customers who have successfully constructed an all-electric home and will showcase the design elements to help support the reach code effort. The FutureFit Heat Pump Water Heater program launched on June 28, 2019 and about 115 people have already shown their interest. The Heat Pump Cost Effectiveness webinar was given on July 3, 2019.

At the July 25, 2019 MAWG meeting, Aimee Bailey introduced a new program focused on grid integration called the Virtual Power Plant (VPP) initiative. To better understand VPP functions and values, SVCE and Gridworks are releasing the [Silicon Valley Clean Energy Virtual Power Plant Options Analysis Discussion Draft](#) to generate thoughts, ideas, and feedback on possible solutions and the path to achieving those solutions in Silicon Valley. Other programs discussed at the MAWG meeting include the [Innovation Onramp Program](#), the [All-Electric Showcase Awards](#), and [FutureFit](#) – the heat pump water heater program. The Heat Pump Water Heater Buyers Guide can be found in Attachment A. It was announced that the City of Berkeley unanimously voted to ban natural gas for new low-rise residential buildings starting January 1, 2020. PG&E has offered to attend council meetings in support of building electrification. There is a Building Decarb Coalition webinar on August 29, 2019 called “Is a Gas Moratorium Right for You?” In addition, SVCE announced that there are existing tools on their website to help support the reach code effort, including the Model Staff Report Letter Template and informational flyers (found in Attachment B). Additional tools are currently under development, including a general slide deck for City staff use, building department checklists, a cost effectiveness informational chart, an electric vehicle cost effectiveness analysis, and an informational video. An update was given to the group that the 2018 GHG inventory is almost completed. Lastly, the Draft EV Infrastructure Joint Action Plan was discussed.

At the August 22, 2019 MAWG meeting, Don Eckert, the Director of Finance of SVCE, gave a presentation on the proposed 2019-2020 operating budget. A status update of the following programs was given: all-electric showcase awards, heat pumps, reach codes, and VPP. In addition, an announcement was made about the California Electric Vehicle Infrastructure Project (CALeVIP): SVCE formed a regional coalition with other Community Choice Aggregations and municipal utilities to try to interest the CEC in partnering on a CALeVIP program in our area. The CEC announced earlier this month that they have chosen SVCE for a CALeVIP launch in 2020, with a combined funding of \$60 million! As SVCE’s territory will have \$12 million dedicated to it (with half coming from the CEC and half from SVCE), this program will lead to substantially more charging infrastructure installed throughout SVCE territory.

More information can be found at:

- [SVCE’s Webpage on CALeVIP](#)
- [CALeVIP Website](#)
- [2020 CALeVIP Announcement Presentation from CEC](#)

At the September 26, 2019 meeting, the group introduced the new SVCE staff members and announced the new open positions. The group discussed a status update on the current SVCE programs. A presentation on the Climate Youth Ambassador Program was given which focuses on bringing environmental awareness to elementary, middle, and high school students. To date, the group has engaged in 11 community outreach events and have talked to over 600 kids. The group intends to expand the climate youth ambassador team so they can continue to spread awareness of the climate crisis.

Attachments:

- A. Summary of Reach Code Pathways
- B. Draft Reach Code Agenda Report
- C. MAWG Regional Update

Summary of Reach Code Pathways 1, 2, and 2A

For the reach code options, SVCE operated under the guidance of providing a cost-effective pathway for All-Electric buildings as well as a cost-effective pathway for Mixed Fuel buildings.

Key:

1= All-electric

2 = mixed fuel (high reach code)

2A = mixed fuel, uses electricity for space and water heating and gas for cooking (modest reach code)

Code Choices for a city:

a. 1 + 2

or

b. 1 +2 + 2A

	1	2	2A
Description	All-Electric Home	Mixed Fuel Home	Mostly Electric, Mixed Fuel
Cost-Effective	Yes	Yes	Not modeled
Prevents future methane leakage	Yes	No	No
Efficiency, % better than Code	0%	25%	10%
Incremental added construction cost to meet reach code	\$0	\$8,000	\$2,000
Air Conditioning fuel type	Electric	Electric	Electric
Space & Water Heating fuel type	Electric	Gas	Electric
Cooking fuel type	Electric	Gas	Gas
Clothes Drying fuel type	Electric	Any	Any (or Electric only)
Additional Technology likely needed to meet Reach code	None	Better insulation, higher efficiency fans, + either Solar Thermal or Battery Storage	Better insulation, higher efficiency fans
Fuel type for outdoor amenities	Any	Any	Any

Summary:

For higher adoption of all-electric homes and for much better carbon savings, select Options 1 + 2.

If a city wants a more gradual transition to all-electric, select Options 1 + 2 + 2A.

Notes:

- In all cases, the reach code refers to what is being used INSIDE the home. So a home with an outdoor firepit (natural gas) but uses electricity only inside the home for space/water heating, cooking, etc. is still considered “All-electric”.
- If a city wants to utilize ONLY 1 + 2A, we will need to model 2A for cost-effectiveness. Because 2 has already been modeled for cost-effectiveness, 2A does not need to be cost-effective as long as it is an option alongside 2.



_____ CALENDAR

Agenda Item # ____

AGENDA REPORT SUMMARY

Meeting Date: October 22, 2019

Subject: Building Electrification and Electric Vehicle Infrastructure Reach Codes – Proposed Reach Codes for 2019 Energy Code

Prepared by: Environmental Commission

Reviewed by: Jon Biggs, Community Development Director

Approved by: Chris Jordan, City Manager

Attachment:

Ordinance No. 2019-XX

Initiated by:

Environmental Commission

Previous Council Consideration:

None

Fiscal Impact:

None anticipated

Environmental Review:

The proposed Ordinance relates to organizational or administrative activities of governments that will not result in direct or indirect physical changes in the environment, and therefore is not a project within the meaning of the California Environmental Quality Act (“CEQA”) and the State CEQA Guidelines, sections 15378(b)(5). Alternately, this ordinance is exempt from CEQA pursuant to State CEQA Guidelines, section 15061(b)(3), “the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment” as the Ordinance has no potential to result in a direct, or reasonably foreseeable, indirect impact on the environment.

Policy Question(s) for Council Consideration:

Does the Council wish to adopt Building Electrification and Electric Vehicle Infrastructure Codes containing requirements that limits power sources to principally electric appliances and fixtures?

Reviewed By:

City Manager

City Attorney

Finance Director

CJ

CD

SE



Subject: Building Electrification and Electric Vehicle Infrastructure Reach Codes – Proposed Reach Codes for 2019 Energy Code

Summary:

Every three years, the State of California adopts new building standards that are organized in Title 24 of the California Code of Regulations, referred to as the California Building Standards Code. The code must be adopted in 2019 and will be effective January 1, 2020. Cities and counties can adopt amendments to building codes that have requirements that exceed minimum building code requirements. Reach codes provide requirements that exceed the standards for the electrical code and require the installation of electric vehicle infrastructure in new construction.

Recommendation:

The Environmental Commission recommends the City Council adopt building electrification and electric vehicle reach codes, which amend the California Building Standards Code that, if adopted, become effective on January 1, 2020; to help reduce carbon emissions associated with new construction, reduce costs in new construction, improve indoor air quality and safety of our building stock, support affordable housing, and increase adoption of electric vehicles.

Purpose

The ordinance will put into effect requirements that mandate the use of certain electrical appliances and fixtures and the installation electric vehicle infrastructure for new construction.

Background

The City of Los Altos demonstrated leadership in sustainability when the City adopted a Climate Action Plan in December of 2013 and joined the Silicon Valley Clean Energy joint powers authority in March of 2016.

In alignment with the above, the Environmental Commission recommends modifying Part 6 and Part 11 of the California Building Code. This report provides an overview of the Statewide cost-effectiveness study, details findings, and provides language recommended for the associated reach code for the 2019 building cycle.

Reach Code Adoption Process

Every three years, the State of California adopts new building standards that are organized in Title 24 of the California Code of Regulations, referred to as the California Building Standards Code. This regular update is referred to as a “code cycle.” The last code cycle was adopted in 2016 and was effective on January 1, 2017. The next code cycle will be adopted in 2019 and will be effective January 1, 2020. Cities and counties can adopt reach codes that require items that are above and minimum state code requirements. However, these reach codes must be filed with the State if adopted by a local agency.

In addition, the California Energy Commission (CEC) requires that a cost-effectiveness study be conducted and filed in the case of local amendments to the Energy Code (Title 24, Part 6). It is



Subject: Building Electrification and Electric Vehicle Infrastructure Reach Codes – Proposed Reach Codes for 2019 Energy Code

required that the City demonstrate to the CEC, using a cost-effectiveness study, that the amendments to the code are financially responsible and do not represent an unreasonable burden to the non-residential and residential applicants. A cost-effectiveness study is not required for amendments to the Green Building Code (Title 24, Part 11).

Statewide Cost-Effectiveness Study for Energy Code Reach Codes

Funded by the California investor-owned utilities (IOUs), the California Statewide Codes and Standards Program (Statewide Program) led the development of a cost-effectiveness study for Energy Code reach codes that examined different performance-based approaches for new construction of specific building types. There are two kinds of reach code approaches: performance-based ordinances and prescriptive ordinances. Performance-based ordinances mandate an increase in the overall energy efficiency required but leave flexibility for the builder on how to achieve this goal. In contrast, prescriptive ordinances mandate implementation of a specific measure (such as solar panels or cool roofs). The Statewide Program's analysis focused on performance-based ordinances but some conclusions about prescriptive measures can be made from the results.

Building Prototypes

The Statewide Program's analysis estimated cost-effectiveness of several building prototypes including one-story and two-story single-family homes, a two-story multifamily building, a three-story office building, a one-story retail building, and a four-story hotel. The single-family homes, multi-family buildings, and office building prototypes are directly applicable to development in Los Altos. The City has averaged approximately 40 new single-family homes constructed each year over the past five years. Additionally, many approved development projects include mixed-use developments or multi-family developments.

Electric Vehicle Charging Infrastructure

Electric Vehicle (EV) charging requirements in California can generally be broken into three categories:

1. EV Charging Installed: all supply equipment is installed at a parking space, such that an EV can charge without additional equipment.
2. EV Ready: Parking space is provided with all power supply and associated outlet, such that a charging station can be plugged in and therefore ready to charge a vehicle.
3. EV Capable: Conduit is installed adjacent to a parking space area, and the building electrical system has ample capacity to serve future energy loads. An electrician would be required to install the conductor and associate outlets before charging is possible.



Subject: Building Electrification and Electric Vehicle Infrastructure Reach Codes – Proposed Reach Codes for 2019 Energy Code

EV charging capacity and speed can be summarized as three categories:

- Level 1: Capable of charging at 120V, 20A. This is equivalent to a standard home outlet.
- Level 2: Capable of charging at 240V, 30-40A. This is the service capacity typically used for larger appliance loads in homes.
- Level 3 (DC Fast Charging): Capable of charging at 20-400kW. This is the type of charger used for Tesla Superchargers and DC Fast Chargers at some public or commercial sites.

The 2019 California Green Building Code Update (Title 24, Part 11) increases requirements for electric vehicle charging infrastructure in new construction; including:

- New one- and two-family dwellings and townhouses with attached private garages: must be Level 2 EV-capable
- Multi-family dwellings: 10% of parking spaces must be Level 2 EV-capable
- Non-residential: 6% of parking spaces must be Level 2 EV-capable

Discussion/Analysis

Building Appliance Electrification

For multiple reasons including health, safety, economic, and environmental benefits, there is considerable interest in mandating all-electric new construction, or “building electrification,” which means that the buildings would not have any fossil fuel services. All-electric buildings have electric appliances for space heating, water heating, clothes-drying, and cooking. The interest in building electrification stems from the fact that Silicon Valley Clean Energy (SVCE) is providing 100% carbon-free electricity and eliminating the use of natural gas can greatly reduce greenhouse gas emissions from the building industry sector. To date, Los Altos does not often see all-electric buildings constructed. Mandating that all new construction be all-electric through the building reach code process has not been chosen as the appropriate path because of legal implications in proving cost-effectiveness of this approach to the CEC. The leading approach is to encourage electrification by giving builders the choice of two options:

1. Achieving a higher energy efficiency level than the Energy Code using mixed fuels (natural gas and electricity); or
2. Building an all-electric building at the minimum efficiency as required in the Energy Code. The Statewide Program’s study analyzed this approach.

Electric Vehicle Charging Infrastructure

Local residents are showing a significant interest in electric vehicles. For example, the number of registered plug-in vehicles in Santa Clara county increased by 31% in 2018 and registrations for vehicles powered by fossil fuels shrank in 2018. It is widely known that availability of EV charging infrastructure is a critical component to EV adoption. Meanwhile, it is significantly more expensive



Subject: Building Electrification and Electric Vehicle Infrastructure Reach Codes – Proposed Reach Codes for 2019 Energy Code

to install charging infrastructure as a retrofit than it is during new construction. As such, ensuring that newly constructed residential and non-residential parking has ample EV charging capability will reduce long-term costs of EV infrastructure installation, while helping to increase EV adoption and decrease transportation-related greenhouse gas emissions. While California’s new minimum requirements are a step forward, it is unlikely that the requirements for multi-family dwellings and non-residential buildings are enough to keep pace with expected EV growth looking towards 2030. The Statewide Program’s team reviewed approaches to increase the amount of EV infrastructure in new construction buildings, while keeping construction costs as low as possible.

Building Appliance Electrification Reach Codes:

Staff and the Environmental Commission have worked closely with SVCE to interpret the study’s results and infer what options may or may not be cost-effective for the building types that are prevalent in Los Altos. Peninsula Clean Energy (PCE) and SVCE have also provided consultant support to assist cities in understanding the cost-effectiveness study results and adopting reach codes. The proposed reach codes meet the requirements of the CEC for cost-effectiveness, and are also a cost-effective approach for constituents, contractors, and developers pursuing new construction within the city limits. In addition, the analysis results show that all-electric buildings are typically less expensive to construct.

Recommended reach code requirements for newly constructed buildings using gas or propane are:
[CITY STAFF: THE FOLLOWING SIX BULLETS NEED TO BE MODIFIED FOR THE SELECTED PATHWAYS]

- Require mixed-fuel buildings to perform 15% better than the baseline simulated building within the standard CEC-required energy simulation.
- Exception: a prescriptive path for energy efficiency improvements has been provided which is laid out in the corresponding ordinance language document
- Require a dedicated 240V, 30-amp circuit with receptacle next to water heaters with breaker space on the panel
- Require a dedicated 240V, 40-amp circuit next to clothes dryers with breaker space on the panel
- Require a dedicated 240V, 50-amp circuit next to cooktops with breaker space on the panel
- Require 3kW solar photovoltaic system on new non-residential buildings with less than 10,000 square feet of gross floor area, and 5kW solar photovoltaic system for non-residential buildings with greater than 10,000 square feet of gross floor area
- Exception: as an alternative to the solar photovoltaic system, require a solar thermal system with a minimum 40 square feet collector area



Subject: Building Electrification and Electric Vehicle Infrastructure Reach Codes – Proposed Reach Codes for 2019 Energy Code

Electric Vehicle Charging Infrastructure Reach Codes

Unlike amendments to the Energy Code, a cost-effectiveness study is not required for amendments to Title 24, Part 11, or the Green Building Code “CALGreen” which covers items such as electric vehicle (EV) charging infrastructure. However, to evaluate the financial impact on first costs, PCE/SVCE commissioned an analysis of the total cost of implementing various EV infrastructure measures. Staff have worked closely with Peninsula Clean Energy, Silicon Valley Clean Energy, and the Statewide Program’s team to establish new construction EV requirements which are more in-line with local EV adoption trends, while providing flexibility for the builder and keeping construction costs as low as possible.

Recommended requirements for EV infrastructure are:

Residential

- Single Family Dwelling: One dedicated “plug and play” Level 2 EV circuit, and if multiple parking spaces are provided for a dwelling unit, one dedicated “plug and play” Level 2 EV circuit and one dedicated “Capable” Level 2 EV circuit.
- Multi-Unit Dwelling, <20 units: Per unit, a single “plug and play” Level 2 EV circuit
- Exception: Not required for units without parking
- Multi-Unit Dwelling, >20 units: 75% of the units, a single “plug and play” Level 1 EV circuit; 25% of the units, a single “plug and play” Level 2 EV circuit
- Exception: Not required for units without parking

“plug and play” is defined as a full circuit installed including capacity to deliver electricity and outlet.

Non-Residential Office

- 10% of the parking spaces, Level 2 EV charging infrastructure installed
- 10% of the parking spaces, “plug and play” Level 1 EV circuits
- 30% of the parking spaces EV capable at the pinch points utilizing at least Level 2-sized conduit with panel capacity for 2kW per EV capable parking space

Non-Residential, Non-Office

- 6% of the parking spaces, Level 2 EV charging infrastructure installed
- 5% of the parking spaces, “plug and play” Level 1 EV circuits
- For parking lots with over 100 spaces, first hundred spaces must adhere to Level 1 & Level 2 requirements, with option to substitute 80kW DC fast charger for subsequent sets of 100 spaces.



Subject: Building Electrification and Electric Vehicle Infrastructure Reach Codes – Proposed Reach Codes for 2019 Energy Code

Once the reach codes are adopted – they must be submitted to the State of California for review and approval – the draft ordinance has been crafted to reflect that the reach codes go into effect once this approval by the State is granted.

A draft ordinance that amends the Building Code and adopts the Reach Codes is included with the agenda report; however, this is not the final version of the ordinance. The final version of the reach code ordinance can take one of several forms and as of the date of packet publication the Environmental Commission had not finalized its recommendation to the City Council on an appropriate version of these codes. It is anticipated that the Environmental Commission will finalize its recommendation on the Reach Code at its meeting of October 14 and the resulting ordinance will be provided to the City Council before its October 22 meeting, at which the ordinance may be considered for introduction. It is not a requirement that the Reach Codes be adopted at the same time as the new building code updates – they can be introduced/adopted later.

A representative from Silicon Valley Clean Energy (SVCE) will be in attendance at the City Council meeting to provide an overview of the proposed reach codes and electric vehicle infrastructure codes. Should the Environmental Commission not have reached a final version of the ordinance if wants to recommend to the City Council – this place on the agenda will serve as a study session that can assist in introducing these propose code amendments to the Community.

Options

1) Hold only a study session on the reach codes

Advantages: Informative to the City Council and the Community on the proposed amendments and expectations for new construction in the future.

Disadvantages: Will delay, to a small degree, implementation of the proposed code amendments.

2) Introduce and waive further reading of Building Electrification and Electric Vehicle Infrastructure Reach Codes

Advantages: Reduce carbon emissions associated with new construction, improve indoor air quality and building safety, support affordable housing, and increase adoption of electric vehicles.

Disadvantages: None identified.



Subject: Building Electrification and Electric Vehicle Infrastructure Reach Codes – Proposed Reach Codes for 2019 Energy Code

3) Do not introduce and read Building Electrification and Electric Vehicle Infrastructure Reach Codes

Advantages: None identified.

Disadvantages: Fail to follow PCE and SVCE member agencies that adopt reach codes to reduce carbon emissions associated with new construction, improve indoor air quality and building safety, support affordable housing, and increase adoption of electric vehicles.

Recommendation

The Environmental Commission recommends Option 2, assuming a draft of the appropriate version of the ordinance is finalized.

DRAFT

Reach Codes

Member Agency	Date	Note	Event Link
Campbell	Oct 15 th	Council Briefing	Event link
County of Santa Clara	Sept 25 th	Staff meeting	Event Link
Cupertino	Oct 14 th	Public Stakeholder meeting	
Gilroy	Nov 4 th	Council 1 st Reading	Event Link
Los Altos	Oct 22 nd	Council Briefing	Event Link
Los Altos Hills	Sept 19 th	Council voted 5-0 for staff to present Reach Codes for first reading at a future date this calendar year (tbd).	Event Link
Milpitas	Oct 15 th	Council 1 st Reading	Event Link
Monte Sereno	Sept 18 th	Stakeholder Meeting – public opposition to reach codes outnumbered support.	
Morgan Hill	Oct 23 rd	Council 1 st Reading	Event Link
	Sept 4 th	Council briefing summary – council requested staff to prioritize electricity only for residential new construction over a reach code.	Video Link Starts at the 3 hour mark
Mountain View	Sept 26 th	Meeting with Consultants	
Saratoga	Oct 16 th	Council Briefing	Event Link
Sunnyvale	Oct 29 th	Council Briefing	No link yet
Los Gatos	Nov 5 th	Council Briefing	Event Link

Regional Efforts

Most cities are currently evaluating reach code options.

Several have approved.

City	Status	Encourage Gas Reduction		Require Gas Reduction	
		High Reach + Electric Heat	High Reach Only	Limited Gas Usage	Ban Natural Gas
Monte Sereno	Evaluating	?			
Los Gatos	Evaluating	?			
Campbell	Evaluating	X			
Gilroy	Evaluating	X			
Milpitas	Evaluating	X			
Saratoga	Evaluating	X			
Sunnyvale	Evaluating		X		
Cupertino	Evaluating		X		
Mountain View	Evaluating			X	
Los Altos	Evaluating			X	
Los Altos Hills	Evaluating			X	
Menlo Park	Approved			X	
San Jose	Approved			X	
Morgan Hill	Evaluating				X
Berkeley	Approved				X



DATE: October 14, 2019

AGENDA ITEM #4

TO: Environmental Commission
FROM: Callie Niday, Staff Liaison
SUBJECT: Environmental Commission Work Plan

RECOMMENDATION:

Review and take action, as appropriate, on the 2019/20 Environmental Commission Work Plan

BACKGROUND

The Environmental Commission met in a Joint Meeting with the City Council on May 7, 2019 to review the Commission's 2018/19 Accomplishments and Draft 2019/20 Target areas and discussed issues and projects for the upcoming year. Based on this discussion, the targets were finalized, and the 2019/20 Work Plan was developed. The Targets and Work Plan are intended to focus the Commission's agenda items and will serve as a roadmap for projects and actions, as appropriate, during the 2019/20 year.

DISCUSSION

Environmental Commission Targets and resulting Work Plan for 2019/20 are:

1. Climate Action Plan
2. Water Conservation and Stormwater Management
3. Solid Waste Diversion
4. Community Outreach and Education

The Commission will review the targets, projects, and status updates at each of its monthly meetings and act appropriately.

Attachments:

- A. Solid Waste Disposal Contract Subcommittee Statement
- B. Environmental Education Fund Update
- C. 2019/20 Targets and Work Plan

October 14, 2019

To: Los Altos City Council and City Staff
From: Los Altos Environmental Commission
Subject: Mission Trails Waste System Contract

During its October 14, 2019 meeting, the Environmental Commission considered and discussed a subcommittee report that provided sustainability perspectives to City Staff during their preparation and negotiation of a draft Mission Trails Waste System (MTWS) Contract extension. The Environmental Commission voted _____ to present the following statement to City Council and City Staff on the MTWS contract extension.

We believe an overwhelming majority of the residents of Los Altos are committed to and value the recycling program currently provided by Mission Trails Waste Systems. Los Altos residents' care and value for recycling are demonstrated by the City's impressive 77% waste diversion rate, the second highest diversion rate as compared to other local jurisdictions. In addition, the results of the 2019 customer survey conducted by the City's consultant, R3 Consulting Group, show that 60% of respondents cited quality and range of services as most important to them while 20% rated cost as most important.

Based on this information, as well as the importance of minimizing our City's environmental impact through the best waste handling practices, the Commission strongly recommends that the current service of separate Garbage, Compost and Recycling collection be retained without reduction in frequency or process for the next 10 to 15 years. We urge the City to not lower the minimum diversion requirement of 65% proposed for the contract extension. We believe County, State and Federal laws will be enacted over the next few years that will improve diversion rates by requiring compostable and recyclable packaging materials, reducing food and product packaging, and limiting single use plastic items.

We recommend that the City increase participation with MTWS on education and outreach efforts. Behaviors that have been or are being learned need to be reinforced. The education and outreach efforts will ensure our community and MTWS customers ready for the time when the value of compost and recycled materials increases.

October 14, 2019

To: Environmental Commission

From: Callie Niday, Staff Liaison

Subject: Los Altos Community Foundation Environmental Education Fund

RECOMMENDATION:

Update the Commission on the Los Altos Community Foundation Environmental Education Fund EnviroThon Challenge

BACKGROUND

In November 2003, the Los Altos Community Foundation (LACF) entered into a Donor Advised Fund Agreement with the Los Altos Environmental Commission (formerly the Los Altos Environmental Committee) for the purposes of creating and maintaining an Environmental Education fund, “the Fund”. The Fund is maintained and administered by LACF and was initially created for the purpose of funding the reprinting of the *Trees of Los Altos* booklet. Upon an initial grant of \$1,000 by LACF, the fund received donations from the public to aid in the printing and distribution of the *Trees* booklet. The books were printed and distributed, though LACF reports hundreds of copies remaining in storage. The current balance of the account is \$3,528 and is to be used specifically for “environmental education”.

DISCUSSION

LACF has informed the City that the \$3,528 balance remains available for environmental education efforts. The Environmental Commission has the authority to make recommendations to LACF for disbursement of the funds.

At the January 14, 2019 meeting, the Environmental Commission discussed potential uses for the environmental education fund. The Commission determined that a brainstorming session would help determine potential uses for the funds and directed Commissioners to bring ideas to the February meeting. The Commissioners will share their ideas and begin to narrow the focus of the environmental education fund.

The Environmental Commission continued its discussion of potential uses for the environmental education fund at the February 11, 2019 meeting. Vice Chair Yuan and Commissioner Teksler formed a subcommittee to distill the February 11, 2019 discussion and develop a list of the group’s top ideas from the brainstorming session.

At the March 11, 2019 meeting, the Environmental Commission continued to discuss the potential uses for the environmental education fund. Commissioner Klein expressed interest to work with the History Museum to develop specific activities and programs to use the funding for engagement and community involvement focused on environmental education as both organizations deem fit, and bring back a generalized proposal with review and input from the Commission.

At the May 13, 2019 meeting, Commissioner Klein gave an update that the Commission is going to work with the Los Altos History Museum to host an activism workshop during the Apricot STEM

Fair on Sunday, June 30, 2019. The goal is for participants to form a team, design an environmental protection campaign, and pitch their campaign for cash funding. The pitches will be recorded, and the Commission will select the winners. The details of how the environmental education fund is being allocated is being discussed and will be presented at the June meeting.

At the June 10, 2019 meeting, Commissioner Klein updated the Commission that 12 applications representing seven schools across four cities were received for the Los Altos EnviroThon Challenge at the Apricot STEM Fair. Despite the challenge of getting the attention of teachers and students at the end of the school year and the challenge of holding the event during the summer break, a great number of students signed up for the event. Commissioner Klein informed the group that the pitch presentations will be recorded and published on the web. Once the videos are reviewed by the Commission, the winners will be selected and the amount of funding to award each team will be decided. Awards will be judged on the basis of both the feasibility of the project idea and the persuasiveness of the presentation. The grand prize-winning team will also receive a session of personalized tutoring in advance of reprising their pitch in front of an audience at the Los Altos Night of Ideas event in September.

At the July 8, 2019 meeting, Commissioner Klein announced that the EnviroThon event was a success. There were 13 participants from seven different schools across four cities. Four teams were formed, and they had only three hours to put together a presentation. The EnviroThon Challenge winners were announced including Fight Back for First Place, Field Trippers and Next Generation tied for Second Place, and Vroom Vroom for Third Place. The Commission unanimously awarded the four winners up to \$1,700 (approximately half) of the Los Altos Community Foundation Environmental Education Fund balance. The group discussed how to allocate funding appropriately. It was announced that the awards will be distributed to non-profit or educational organizations selected by the winning teams. The remaining education fund balance will go towards hosting a similar event next year.

On the August 12, 2019 meeting, Commissioner Klein gave an update that the winning team, Fight Back, has been actively involved with the City for the carbon dividend tax. The two teams focusing on education has attended a few community events and has decided to combine funds (\$800 total). One of the groups gave a presentation to the Cupertino City Council with the Youth Climate Group. Commissioner Klein will give an update on the award distribution process at the next Environmental Commission meeting on September 9, 2019.

On the September 9, 2019 meeting, Commissioner Klein gave an update on the award distributions which includes the following: \$600 for first place, \$400 for both second place winners (total of \$800), and \$300 for the final team. The Commission is requesting to receive an update from all of the winning teams at a future commission meeting. An update can be provided to the Commission during the public comment period or the Commission can add this to the agenda of a future meeting. The Commission plans on discussing the details for next year's event at a future commission meeting.

ENVIRONMENTAL COMMISSION

2019/20 Targets & Work Plan

October 14, 2019

Targets	Projects	Assignments	Target Date	City Priority related to	Status
Climate Action Plan	Review and comment on Building and Electric Vehicle Reach Codes	<ul style="list-style-type: none"> Subcommittee -Don Weiden, Laura Tekslar and Lei Yuan 	January 2020	CAP Goals	<ul style="list-style-type: none"> SVCE presentation of Building Model Reach Code language on May 29, 2019 SVCE presentation of Electric Vehicle Model Reach Code language on June 6, 2019 SVCE presentation of Reach Codes to Environmental Commission on July 8, 2019; EC made a motion to support staff development and ratification of a reach code Subcommittee met on July 15, 2019 The subcommittee will come back with recommendations to City staff by the next EC meeting The Commission will vote on a recommendation of the reach code pathways on October 14, 2019
	Update of City's CAP	<ul style="list-style-type: none"> Subcommittee to work with staff and Subconsultant 	Monthly	CAP Goals	<ul style="list-style-type: none"> The Sustainability Coordinator position was approved by the City Council for the Fiscal Year 2019-20 / 2020-21 Operating Budget on June 11, 2019; the job posting has been created (Oct. 2019) This is on hold until the new Sustainability Coordinator is on board
Water Conservation & Stormwater Management	Green Infrastructure Plan	<ul style="list-style-type: none"> Assist staff in development and review of Plan 	June 2019	Storm Water Regional Discharge Permit	<ul style="list-style-type: none"> Staff made a presentation of their final plan to the Environmental Commission on May 13, 2019 Approved by City Council on July 9, 2019

Solid Waste Diversion	Provide review comments on Solid Waste Disposal Contract	<ul style="list-style-type: none"> Subcommittee Don Weiden, Laura Tekler and Chad Martin 	January 2020	Solid Waste Disposal	<ul style="list-style-type: none"> Subcommittee met with staff and City Consultant on March 20, 2019 for a study session; City held a Community Meeting on May 15, 2019; staff met with subcommittee on Thursday, August 15; a Study Session was held with City Council on August 27; the contract is on the agenda (tentatively) for October 22, 2019
	Investigate initiatives on limiting single use plastics	<ul style="list-style-type: none"> Subcommittee to work with staff and Subconsultant 	Monthly	Recycling	<ul style="list-style-type: none"> Update to EC on June 10, 2019 The City of Los Altos is participating in the Ad Hoc Model Foodware Ordinance Committee Andrea Trese from the City's Engineering Division is the Los Altos representative
Community Outreach & Education	Develop program in collaboration with the Los Altos History Museum	<ul style="list-style-type: none"> Environmental Education Fund held by LACF David Klein 	June 2019	Public outreach and education	<ul style="list-style-type: none"> Coordination with History Museum Apricot Stem Fair EnviroThon Challenge held at the Apricot STEM Fair on June 30, 2019 Winners and awards were selected at the EC meeting of July 8, 2019
	Update environmental measures on the City web site	<ul style="list-style-type: none"> Chad Martin 	Ongoing	Public outreach and education	
	Continue gas-powered leaf blower ban outreach and education	<ul style="list-style-type: none"> Laura Tekler 	Ongoing	Public outreach and education	
	Continue anti-idling outreach and education	<ul style="list-style-type: none"> Don Weiden 	Ongoing	Public outreach and education	<ul style="list-style-type: none"> June 10, 2019 Report on Los Altos HS Survey Results
	Continue to support SVCEA community outreach and education		Ongoing	Public outreach and education	
	Assist staff with various outreach and education efforts	<ul style="list-style-type: none"> Climate Action Plan Water Conservation Storm Water Management Solid Waste Diversion Urban Forest / Trees Downtown Vision 		Public outreach and education	



DATE: October 14, 2019

AGENDA ITEM #5

TO: Environmental Commission

FROM: Callie Niday, Staff Liaison

SUBJECT: City Staff Updates

RECOMMENDATION:

Receive staff update

BACKGROUND

Monthly staff updates will be discussed as listed below.

DISCUSSION

1. Environmental Commission attendance for upcoming Council meetings

Attachment:

- A. 2019 City Council Meeting Attendance Assignments



**1 North San Antonio Road
Los Altos, California 94022-3087
M E M O R A N D U M**

DATE: October 14, 2019
TO: Environmental Commission
FROM: Callie Niday, Staff Liaison

SUBJECT: TENTATIVE 2019 City Council Meeting Attendance Assignments

Please sign up to attend or view (online) three (3) Regular City Council meetings for 2019.

Tentative 2019 Schedule

2019 Regular City Council meeting dates:	Attendance by:
January 8, 2019	Don Weiden
January 22, 2019	Laura Teksler
February 12, 2019	Lei Yuan
February 26, 2019	Don Bray
March 12, 2019	Don Weiden
March 26, 2019	David Klein
April 9, 2019	Laura Teksler
April 23, 2019	Don Weiden
May 14, 2019	Don Weiden
May 28, 2019	Chad Martin
June 11, 2019	Don Bray
June 25, 2019	Heather Halkola
July 9, 2019	Lei Yuan
August 27, 2019	Laura Teksler
September 10, 2019	David Klein
September 24, 2019	Chad Martin
October 22, 2019	
November 12, 2019 (Tuesday)	
November 26, 2019	
December 10, 2019	

Regular City Council meetings are scheduled to begin at 7:00 p.m. and are held on the 2nd and 4th Tuesdays of the month. If you are unable to attend or view one of the City Council meetings to which you are assigned, please arrange for another Commissioner to attend in your place.